

Notice of Allowability

Application No.

10/044,455

Examiner

Michael P. Mooney

Applicant(s)

LI ET AL.

Art Unit

2883

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 2/20/04 Amdt.
2. ☒ The allowed claim(s) is/are 1-7 and 9-14.
3. ☒ The drawings filed on 11 January 2002 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
 - * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date 2/20/04
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____.
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

REASONS FOR ALLOWANCE

The following is an examiner's statement of reasons for allowance:

The prior art, either alone or in combination, does not disclose or render obvious a dispersion and dispersion slope compensating optical waveguide wherein the combination of $\Delta_{\text{sub.i}}\%$'s and $r_{\text{sub.i}}$'s is selected to provide a negative total dispersion slope more negative than $-1.5 \text{ ps/sq. nm/km}$ at 1550 nm and a ratio of total dispersion to total dispersion slope in the range of 40 nm to 60 nm at a wavelength of 1550 nm in combination with the rest of claim 1 for the reasons stated by Applicant in the Remarks section filed 2/20/04.

It is noted that the claim 1 is allowable because the unique combination of each and every specific element stated in the claim.

The prior art, either alone or in combination, does not disclose or render obvious a dispersion and dispersion slope compensating optical waveguide wherein the combination of $\Delta_{\text{sub.i}}\%$'s and $r_{\text{sub.i}}$'s is selected to provide a negative total dispersion slope and a ratio of total dispersion to total dispersion slope in the range of 40 nm to 60 nm at a wavelength of 1550 nm further including a 1st and a 2nd clad layer, said 1st layer being nearer the core region, each said layer having respective radii, $r_{\text{sub.cj}}$, relative refractive index percents, $\Delta_{\text{sub.cj}}\%$, where j takes on the values 1 and 2, the value 1 corresponding to an inner clad layer and the value 2 to an outer clad layer wherein;

$\Delta_{\text{sub.c1}}\% < \Delta_{\text{sub.c2}}\% > 22 \text{ }\mu\text{m}$, and the difference between $\Delta_{\text{sub.c2}}\%$ and $\Delta_{\text{sub.c1}}\%$ is less than or equal to 0.1% in combination with the rest of claim 4 for the reasons stated by Applicant in the Remarks section filed 2/20/04.

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It is noted that the claim 4 is allowable because the unique combination of each and every specific element stated in the claim.

The prior art, either alone or in combination, does not disclose or render obvious a dispersion and dispersion slope compensating optical waveguide wherein the pre-selected end to end total dispersion at 1550 nm is zero and the local total dispersion along said span has a magnitude greater than or equal to 1.0 ps/nm/km in combination with the rest of claim 9 for the reasons stated by Applicant in the Remarks section filed 2/20/04.

It is noted that the claim 9 is allowable because the unique combination of each and every specific element stated in the claim.

The prior art, either alone or in combination, does not disclose or render obvious a dispersion and dispersion slope compensating optical waveguide wherein

the ratio of total dispersion to total dispersion slope in the range of 40 nm to 60 nm at a wavelength of 1550 nm of said 1st and a 2nd lengths are equal to each other within 5%, the ratio of the 1st length to the 2nd length is not less than 35, and the end to end total dispersion of said span has a pre-selected value at 1550 nm wherein the ratio of total dispersion to total dispersion slope at 1550 nm for both said 1st and 2nd optical waveguide fiber (OWF) lengths have a range from 40nm to 60nm in combination with the rest of claim 10 for the reasons stated by Applicant in the Remarks section filed 2/20/04.

It is noted that the claim 10 is allowable because the unique combination of each and every specific element stated in the claim.

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The prior art, either alone or in combination, does not disclose or render obvious a dispersion and dispersion slope compensating optical waveguide wherein the ratio of total dispersion to total dispersion slope in the range of 40 nm to 60 nm at a wavelength of 1550 nm of said 1st and a 2nd lengths are equal to each other within 5%, the ratio of the 1st length to the 2nd length is not less than 35, and the end to end total dispersion of said span has a pre-selected value at 1550 nm wherein the 2nd length of OWF includes a core region surrounded by and in contact with a clad layer ...in combination with the rest of claim 11 for the reasons stated by Applicant in the Remarks section filed 2/20/04.

It is noted that the claim 11 is allowable because the unique combination of each and every specific element stated in the claim.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael P. Mooney whose telephone number is 571-272-2422. The examiner can normally be reached during weekdays, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G. Font can be reached on 571-272-2415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-

1562.



Michael P. Mooney

Examiner

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Frank G. Font

Supervisory Patent Examiner

Art Unit 2883

FGF/mpm

11/29/04